

DOCKET NO.: TIC-0010
Application No.: 10/019,201
Office Action Dated: March 14, 2003

PATENT
REPLY FILED UNDER EXPEDITED
PROCEDURE PURSUANT TO 37 CFR § 1.116

REMARKS/ARGUMENTS

Status of the Application

Claims 1-10 are pending and stand rejected. Claim 7 has been amended. No new matter has been added to the present application.

In view of the foregoing amendments and the following remarks, Applicants respectfully request entry of this Amendment Response, reconsideration of the present application and an early Notice of Allowance.

Objections of Record

Claim 7 is objected to for containing certain informalities. Applicants have amended claim 7 by deleting “the” on line 4. Applicant has not changed “of” to “or” in lines 5 and 6 because “of” is believed to be correct. Therefore, Applicants respectfully request withdrawal of the objection to claim 7.

Claim Rejections – 35 U.S.C. § 102(b)

Claims 1-2, 4 and 6 stand finally rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Sugawara *et al.* (U.S. Pat. No. 6,060,772 and Sugawara hereinafter). Because the Examiner referred to Sugawara only by name, and did not include Sugawara in the PTO Form 892 that accompanied the Office Action, Applicants assume that Sugawara is the same U.S. patent that is contained in PTO Form 1449, submitted March 20, 2002. Applicants respectfully traverse the rejection and request reconsideration because Sugawara fails to teach every element of the recited claims.

Applicants note that Sugawara discloses a power semiconductor module. The module has semiconductor chips that have control electrodes that are connected to wiring patterns formed on a controlling substrate disposed above the semiconductor chips. (Col. 2, ll. 29-38).

In light of the foregoing amendments, Applicants respectfully submit that the Examiner's rejection is moot because Sugawara does not disclose all of the limitations of newly amended claim 1. In particular, Sugawara fails to disclose a "main current electrode [arranged] above one of said plurality of semiconductor elements or wiring pattern connected to the one of said plurality of semiconductor elements" as claimed. The Examiner points to electrode 5 of Sugawara as anticipating the main current electrode 13 of the present application. Applicants respectfully submit that while electrode 5 may be at a slight elevation difference as opposed to insulated wiring substrate 2, electrode 5 is not above the insulated wiring substrate 2. (Fig. 3) Instead, electrode 5 is located to the side of the insulated wiring substrate 2. Therefore, electrode 5 of Sugawara cannot anticipate the main current electrode 13 of the present application that is arranged "*above* one of said plurality of semiconductor elements..." as claimed.

Because Sugawara does not recite all the limitations of claim 1, Applicants respectfully submit that Sugawara does not anticipate claim 1. As claims 2, 4 and 6 ultimately depend from claim 1, Applicants respectfully submit that claims 2, 4 and 6 are not anticipated by Sugawara for the reasons explained above.

Moreover, with respect to claim 4, Sugawara fails to disclose a "thermal conductor member at a bottom of the semiconductor device" as claimed. The Examiner points to metal base 1 of Sugawara as anticipating the thermal conductor base board 3 of the present

application. Applicants respectfully submit that metal base 1 is not a thermal conductor member. Sugawara nowhere discloses any thermal properties of metal base 1. In addition, it may be assumed that *metal* base 1 must be fabricated from a metal, which is not a requirement of the thermal conductor member as claimed. Accordingly, Applicants respectfully submit that Sugawara does not anticipate claim 4.

Claim Rejections – 35 U.S.C. § 103(a)

Claim 3 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sugawara in view of Bryan (U.S. Pat. No. 3,735,057 and Bryan hereinafter). Claim 5 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sugawara in view of Dubelloy (U.S. Pat. No. 5,495,889 and Dubelloy hereinafter). Claims 7-10 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sugawara in view of Ota *et al.* (JP 6-283639 and Ota hereinafter).

These rejections are respectfully traversed. As discussed above concerning claim 1, Sugawara fails to disclose main current electrode 13 of the present application that is arranged “*above* one of said plurality of semiconductor elements...” as claimed. Applicants respectfully submit that Bryan is devoid of teachings that would suggest the subject matter of claim 3 in the context of a semiconductor device having a main current electrode formed above semiconductor elements as in claim 1. Accordingly, Applicants respectfully submit that claim 3 patentably defines over Sugawara in view of Bryan.

Dubelloy, like Bryan, is devoid of teachings that would suggest the subject matter of claim 5 in the context of a semiconductor device having a main current electrode formed

above semiconductor elements as in claim 1. Accordingly, Applicants respectfully submit that claim 5 patentably defines over Sugawara in view of Bryan.

With respect to claims 7-10, Applicants respectfully submit that the cited references, either separately or in combination, do not render obvious the invention as claimed. The Examiner points to the electrodes 14 of Sugawara as being “a member on which a main current electrode ... and a terminal ... are formed integrally” as in the present application. The electrodes 14 are “for receiving signals from outside,” and are not adapted to have a main current electrode or terminal integrally formed thereon as in the claimed invention. (Col. 5, ll. 8-10; Fig. 3). Thus, Sugawara neither teaches nor suggests a member on which a main current electrode and a terminal are formed integrally as claimed.

Applicants respectfully submit that Ota fails to cure the deficiencies of Sugawara. Ota describes an integrated circuit having three copper plates, one of which (the second copper plate 5) is overlapped on the third copper plate 6. (Translation, p. 1, ll. 9-14; Fig. 1). Applicants respectfully contend that Ota is devoid of teachings that would suggest the subject matter of claim 7 in the context of a member on which a main current electrode and a terminal are formed integrally as claimed. Accordingly, Applicants respectfully submit that claims 7-10 patentably define over Sugawara in view of Ota.

CONCLUSION

Applicants respectfully submit that the present rejection was made prematurely final as Applicant's previous amendment did not “necessitate” a new rejection. The addition to claim 1 made in Applicant's response to the Office Action of September 11, 2002 was the subject matter of pending claim 8. Thus, the Examiner should have already searched the

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subject matter of both claims 1 and 8 in preparing the first Office Action. According to MPEP § 706.07(a), “a second or subsequent action on the merits in any application ... should not be made final if it includes a rejection, on prior art not of record, of any claim amended to include limitations which should reasonably have been expected to be claimed.” Applicants respectfully contend that adding the subject matter of claim 8 to claim 1 in light of the Examiner’s rejections in the September 11, 2002 Office Action should have reasonably been expected. Accordingly, Applicants respectfully request withdrawal of the finality of the Office Action dated March 14, 2003.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the pending claims patentably define over the prior art. Accordingly, a Notice of Allowance is respectfully requested.

In the event that the Examiner believes that the present application is not allowable for any reason, the Examiner is encouraged to contact the undersigned attorney to discuss resolution of any remaining issues.

Respectfully submitted,



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